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P.S. #4

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/886,055DATE: 10/10/2001
TIME: 14:10:06Input Set : D:\78277150.app
Output Set: N:\CRF3\10102001\I886055.raw

3 <110> APPLICANT: STRYER, LUBERT
 4 ZOZULYA, SERGEY
 6 <120> TITLE OF INVENTION: RECEPTOR FINGERPRINTING, SENSORY PERCEPTION, AND
 7 BIOSENSORS OF CHEMICAL SENSANTS
 9 <130> FILE REFERENCE: 078003-0277150
 11 <140> CURRENT APPLICATION NUMBER: 09/886,055
 12 <141> CURRENT FILING DATE: 2001-06-22
 14 <150> PRIOR APPLICATION NUMBER: 60/213,812
 15 <151> PRIOR FILING DATE: 2000-06-22
 17 <160> NUMBER OF SEQ ID NOS: 522
 19 <170> SOFTWARE: PatentIn Ver. 2.1
 21 <210> SEQ ID NO: 1
 22 <211> LENGTH: 325
 23 <212> TYPE: PRT
 24 <213> ORGANISM: Homo sapiens
 26 <400> SEQUENCE: 1

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 30 Gly Asn Gln Thr Thr Ile Thr Glu Phe Ile Leu Leu Gly Phe Phe Lys
 31 20 25 30
 33 Gln Asp Glu His Gln Asn Leu Leu Phe Val Leu Phe Leu Gly Met Tyr
 34 35 40 45
 36 Leu Val Thr Val Ile Gly Asn Gly Leu Ile Ile Val Ala Ile Ser Leu
 37 50 55 60
 39 Asp Thr Tyr Leu His Thr Pro Met Tyr Leu Phe Leu Ala Asn Leu Ser
 40 65 70 75 80
 42 Phe Ala Asp Ile Ser Ser Ile Ser Asn Ser Val Pro Lys Met Leu Val
 43 85 90 95
 45 Asn Ile Gln Thr Lys Ser Gln Ser Ile Ser Tyr Glu Ser Cys Ile Thr
 46 100 105 110
 48 Gln Met Tyr Phe Ser Ile Val Phe Val Val Ile Asp Asn Leu Leu Leu
 49 115 120 125
 51 Gly Thr Met Ala Tyr Asp His Phe Val Ala Ile Cys His Pro Leu Asn
 52 130 135 140
 54 Tyr Thr Ile Leu Met Arg Pro Arg Phe Gly Ile Leu Leu Thr Val Ile
 55 145 150 155 160
 57 Ser Trp Phe Leu Ser Asn Ile Ile Ala Leu Thr His Thr Leu Leu Leu
 58 165 170 175
 60 Ile Gln Leu Leu Phe Cys Asn His Asn Thr Leu Pro His Phe Phe Cys
 61 180 185 190
 63 Asp Leu Ala Pro Leu Leu Lys Leu Ser Cys Ser Asp Thr Leu Ile Asn
 64 195 200 205
 66 Glu Leu Val Leu Phe Ile Val Gly Leu Ser Val Ile Ile Phe Pro Phe
 67 210 215 220
 69 Thr Leu Ser Phe Phe Ser Tyr Val Cys Ile Ile Arg Ala Val Leu Arg
 70 225 230 235 240
 72 Val Ser Ser Thr Gln Gly Lys Trp Lys Ala Phe Ser Thr Cys Gly Ser

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73 245 250 255
 75 His Leu Thr Val Val Leu Leu Phe Tyr Gly Thr Ile Val Gly Val Tyr
 76 260 265 270
 78 Phe Phe Pro Ser Ser Thr His Pro Glu Asp Thr Asp Lys Ile Gly Ala
 79 275 280 285
 81 Val Leu Phe Thr Val Val Thr Pro Met Ile Asn Pro Phe Ile Tyr Ser
 82 290 295 300
 84 Leu Arg Asn Lys Asp Met Lys Gly Ala Leu Arg Lys Leu Ile Asn Arg
 85 305 310 315 320
 87 Lys Ile Ser Ser Leu
 88 325
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 92 <211> LENGTH: 978
 93 <212> TYPE: DNA
 94 <213> ORGANISM: Homo sapiens
 96 <400> SEQUENCE: 2
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 98 accatcaactg aattcattctt cctgggattt ttcaagcagg atgagcatca aaacccctc 120
 99 tttgtgtctt tcttgggtat gtacctggtc actgtgattt ggaacgggctt catcattgtg 180
 100 gctatcagct tggatacgtt ctttcatacc cccatgtatc tcttccttgc caatctatcc 240
 101 tttgctgata ttccctccat ttccaaactca gttcccaaaaa tgctgggtaa tattcaaacc 300
 102 aagagtcaat ccatcttta tgagagctgc atcacacaga tgtactttt tattgtgttt 360
 103 gtcgtcattt gcaatttgcctt cttggggacc atggccatgc accactttgtt ggcgatctgc 420
 104 caccctctga attatacaat tctcatgccc cccaggttcg gcattttgtt cacagtcatc 480
 105 tcatgggttcc tcaatataat tattgtctgc acacacaccc ttctgctcat tcaattgtctc 540
 106 ttctgttaacc acaacactctt cccacacttc ttctgtgact tggccctctt gctcaaactg 600
 107 tcctgttcaatc atacattgtt caatgagctt gtgtgttta ttgtgggtttt atcagtttac 660
 108 atcttccctt ttacactcag cttctttcc tatgtctgc tcatcagagc tgccttgaga 720
 109 gatatccca cacaggaaaa gtggaaagcc ttctccactt gtggctctca cctgacagttt 780
 110 gtattactgt tctacggAAC cattgttaggc gtgtactttt tccctcttc cactcaccct 840
 111 gaggacactg ataagattgg tgctgtccctt ttcaactgtgg tgacacccat gataaacc 900
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 117 <211> LENGTH: 314
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 119 <213> ORGANISM: Homo sapiens
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 125 Leu Gly Phe Thr Asp Tyr Pro Lys Leu Gln Ile Pro Leu Phe Leu Val
 126 20 25 30
 128 Phe Leu Leu Met Tyr Val Ile Thr Val Val Gly Asn Leu Gly Met Ile
 129 35 40 45
 131 Ile Ile Ile Lys Ile Asn Pro Lys Phe His Thr Pro Met Tyr Phe Phe
 132 50 55 60
 134 Leu Ser His Leu Ser Phe Val Asp Phe Cys Tyr Ser Ser Ile Val Thr
 135 65 70 75 80
 137 Pro Lys Leu Leu Glu Asn Leu Val Met Ala Asp Lys Ser Ile Phe Tyr

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Input Set : D:\78277150.app
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138 85 90 95
 140 Phe Ser Cys Met Met Gln Tyr Phe Leu Ser Cys Thr Ala Val Val Thr
 141 100 105 110
 143 Glu Ser Phe Leu Leu Ala Val Met Ala Tyr Asp Arg Phe Val Ala Ile
 144 115 120 125
 146 Cys Asn Pro Leu Leu Tyr Thr Val Ala Met Ser Gln Arg Leu Cys Ala
 147 130 135 140
 149 Leu Leu Val Ala Gly Ser Tyr Leu Trp Gly Met Phe Gly Pro Leu Val
 150 145 150 155 160
 152 Leu Leu Cys Tyr Ala Leu Arg Leu Asn Phe Ser Gly Pro Asn Val Ile
 153 165 170 175
 155 Asn His Phe Phe Cys Glu Tyr Thr Ala Leu Ile Ser Val Ser Gly Ser
 156 180 185 190
 158 Asp Ile Leu Ile Pro His Leu Leu Phe Ser Phe Ala Thr Phe Asn
 159 195 200 205
 161 Glu Met Cys Thr Leu Leu Ile Ile Leu Thr Ser Tyr Val Phe Ile Phe
 162 210 215 220
 164 Val Thr Val Leu Lys Ile Arg Ser Val Ser Gly Arg His Lys Ala Phe
 165 225 230 235 240
 167 Ser Thr Trp Ala Ser His Leu Thr Ala Ile Thr Ile Phe His Gly Thr
 168 245 250 255
 170 Ile Leu Phe Leu Tyr Cys Val Pro Asn Ser Lys Asn Ser Arg Gln Thr
 171 260 265 270
 173 Val Lys Val Ala Ser Val Phe Tyr Thr Val Val Asn Pro Met Leu Asn
 174 275 280 285
 176 Pro Pro Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Asp Ala Phe Trp
 177 290 295 300
 179 Lys Leu Ile His Thr Gln Val Pro Phe His
 180 305 310
 183 <210> SEQ ID NO: 4
 184 <211> LENGTH: 945
 185 <212> TYPE: DNA
 186 <213> ORGANISM: Homo sapiens
 188 <400> SEQUENCE: 4
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 190 gattacccaa agcttcagat tcctctcttc cttgtgttc tgctcatgtatgttatcaca 120
 191 gtggtaggaa accttggat gatcataata atcaagatta accccaaatt tcacactcct 180
 192 atgtactttt tccttagtca cctctctttt gttgattttt gttactcttc cattgtca 240
 193 cccaagctgc ttgagaactt gtaatggca gataaaagca tcttctactt tagctgcattg 300
 194 atgcagttact tcctgtcctg cactgctgtg gtgacagagt ctttcttgct ggcagtgtatg 360
 195 gcttatgacc gctttgtggc catctgcaat cctctgtttt atacagtggc catgtcacag 420
 196 aggtctgtg ccctgtggc gctgggtca tatctctgg gcatgtttgg ccccttggta 480
 197 cccctttgtt atgctctccg gttaaacttc tctggaccta atgtaatcaa ccacttcttt 540
 198 tgtgagtata ctgctctcat ctctgtgtct ggctctgata tactcatccc ccacctgctg 600
 199 ctttcagct tcgccccacccat caatgagatg tgtacactac tgatcatctt cacttcctat 660
 200 gttttcattt ttgtgactgt actaaaaatc cggttctgtta gtggggcaca caaaggcttc 720
 201 tccacctggg cctcccacct gactgctatc accatcttcc atgggacat cctttcctt 780
 202 tactgtgtac ccaactccaa aaactctcgg caaacagtc aagtggcctc tgtatccac 840
 203 acagttgtca accccatgtc gaaccctccg atctacagcc taaggaataa agacgtgaag 900

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Input Set : D:\78277150.app
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 208 <211> LENGTH: 313
 209 <212> TYPE: PRT
 210 <213> ORGANISM: Homo sapiens
 212 <400> SEQUENCE: 5
 213 Met Leu Leu Thr Asp Arg Asn Thr Ser Gly Thr Thr Phe Thr Leu Leu
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 216 Gly Phe Ser Asp Tyr Pro Glu Leu Gln Val Pro Leu Phe Leu Val Phe
 217 20 25 30
 219 Leu Ala Ile Tyr Asn Val Thr Val Leu Gly Asn Ile Gly Leu Ile Val
 220 35 40 45
 222 Ile Ile Lys Ile Asn Pro Lys Leu His Thr Pro Met Tyr Phe Phe Leu
 223 50 55 60
 225 Ser Gln Leu Ser Phe Val Asp Phe Cys Tyr Ser Ser Ile Ile Ala Pro
 226 65 70 75 80
 228 Lys Met Leu Val Asn Leu Val Val Lys Asp Arg Thr Ile Ser Phe Leu
 229 85 90 95
 231 Gly Cys Val Val Gln Phe Phe Phe Cys Thr Phe Val Val Thr Glu
 232 100 105 110
 234 Ser Phe Leu Leu Ala Val Met Ala Tyr Asp Arg Phe Val Ala Ile Cys
 235 115 120 125
 237 Asn Pro Leu Leu Tyr Thr Val Asp Met Ser Gln Lys Leu Cys Val Leu
 238 130 135 140
 240 Leu Val Val Gly Ser Tyr Ala Trp Gly Val Ser Cys Ser Leu Glu Leu
 241 145 150 155 160
 243 Thr Cys Ser Ala Leu Lys Leu Cys Phe His Gly Phe Asn Thr Ile Asn
 244 165 170 175
 246 His Phe Phe Cys Glu Phe Ser Ser Leu Leu Ser Leu Ser Cys Ser Asp
 247 180 185 190
 249 Thr Tyr Ile Asn Gln Trp Leu Leu Phe Phe Leu Ala Thr Phe Asn Glu
 250 195 200 205
 252 Ile Ser Thr Leu Leu Ile Val Leu Thr Ser Tyr Ala Phe Ile Val Val
 253 210 215 220
 255 Thr Ile Leu Lys Met Arg Ser Val Ser Gly Arg Arg Lys Ala Phe Ser
 256 225 230 235 240
 258 Thr Cys Ala Ser His Leu Thr Ala Ile Thr Ile Phe His Gly Thr Ile
 259 245 250 255
 261 Leu Phe Leu Tyr Cys Val Pro Asn Ser Lys Asn Ser Arg His Thr Val
 262 260 265 270
 264 Lys Val Ala Ser Val Phe Tyr Thr Val Val Ile Pro Met Leu Asn Pro
 265 275 280 285
 267 Leu Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Asp Thr Val Thr Glu
 268 290 295 300
 270 Ile Leu Asp Thr Lys Val Phe Ser Tyr
 271 305 310
 274 <210> SEQ ID NO: 6
 275 <211> LENGTH: 942
 276 <212> TYPE: DNA

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Input Set : D:\78277150.app

Output Set: N:\CRF3\10102001\I886055.raw

277 <213> ORGANISM: Homo sapiens

279 <400> SEQUENCE: 6

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 281 tacccagaac tgcaagtccc actcttcctg gttttctgg ccatctacaa tgtcaactgtg 120
 282 ctagggata ttgggttcat tgcgtatcatc aaaatcaacc ccaaactgca taccccccattg 180
 283 tacttttcc tcagccaact ctccttgc gatttctgtt attcctccat cattgctccc 240
 284 aagatgttgg tgaacctgt tgcgttcaagac agaaccattt catttttagg atgcgttagta 300
 285 caattctttt tcttctgtac ctttgggtc actgaatcct ttttattagc tgcgtatggcc 360
 286 tatgaccgct tcgtggccat ttgcaaccct ctgccttaca cagttgacat gtcccagaaa 420
 287 ctctgcgtgc tgctgggtgt gggatcctat gcctggggag tctcatgttc cttggaaactg 480
 288 acgtgtctgt cttaaaagtt atgtttcat ggttcaaca caatcaatca ctcttctgt 540
 289 gagttctcct cactactctc ctttcttgc tctgatactt acatcaacca gtggctgcta 600
 290 ttctttcttg ccacctttaa tgaaatcagc acactactca tcgttctcac atcttatgctg 660
 291 ttcatgttg taaccatcct caagatgcgt tcagtcagtg ggcgcgccaa agccttctcc 720
 292 acctgtgcct cccacctgac tgccatcacc atctccatg gcaccatcct ctcccttac 780
 293 tgtgtgcccc actccaaaaa ctccaggcac acagtcggaa tggcctctgt gtttacacc 840
 294 gtgggtgatcc ccatgttggaa tccctgtatc tacagtctga gaaataaaga tgtcaaggat 900
 295 acagtccaccc agataactggc caccaaaagtc ttctcttact ga 942

298 <210> SEQ ID NO: 7

299 <211> LENGTH: 309

300 <212> TYPE: PRT

301 <213> ORGANISM: Homo sapiens

303 <400> SEQUENCE: 7

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 305 1 5 10 15
 307 Glu Asn Leu Glu Leu Trp Lys Ile Phe Ser Ala Val Phe Leu Val Met
 308 20 25 30
 310 Tyr Val Ala Thr Val Leu Glu Asn Leu Leu Ile Val Val Thr Ile Ile
 311 35 40 45
 313 Thr Ser Gln Ser Leu Arg Ser Pro Met Tyr Phe Phe Leu Thr Phe Leu
 314 50 55 60
 316 Ser Leu Leu Asp Val Met Phe Ser Ser Val Val Ala Pro Lys Val Ile
 317 65 70 75 80
 319 Val Asp Thr Leu Ser Lys Ser Thr Thr Ile Ser Leu Lys Gly Cys Leu
 320 85 90 95
 322 Thr Gln Leu Phe Val Glu His Phe Phe Gly Gly Val Gly Ile Ile Leu
 323 100 105 110
 325 Leu Thr Val Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Lys Pro Leu
 326 115 120 125
 328 His Tyr Thr Ile Ile Met Ser Pro Arg Val Cys Cys Leu Met Val Gly
 329 130 135 140
 331 Gly Ala Trp Val Gly Gly Phe Met His Ala Met Ile Gln Leu Leu Phe
 332 145 150 155 160
 334 Met Tyr Gln Ile Pro Phe Cys Gly Pro Asn Ile Ile Asp His Phe Ile
 335 165 170 175
 337 Cys Asp Leu Phe Gln Leu Leu Thr Leu Ala Cys Thr Asp Thr His Ile
 338 180 185 190
 340 Leu Gly Leu Leu Val Thr Leu Asn Ser Gly Met Met Cys Val Ala Ile
 341 195 200 205

Use of n and / or Xaa has been detected in the
 Sequence Listing. Review the Sequence Listing
 to ensure a corresponding explanation is present
 in the <220> to <223> fields of each sequence
 using n or Xaa.

VERIFICATION SUMMARY
PATENT APPLICATION: US/09/886,055

DATE: 10/10/2001
TIME: 14:10:07

Input Set : D:\78277150.app
Output Set: N:\CRF3\10102001\I886055.raw

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L:2009 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:43
L:2012 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:43
L:2015 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:43
L:2033 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:43
L:2036 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:43
L:2113 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:44
L:2114 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:44
L:2115 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:44
L:2120 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:44
L:2121 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:44
L:2537 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:53
L:2543 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:53
L:2604 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:54
L:2605 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:54
L:2742 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:57
L:2805 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:58
L:4139 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:87
L:4217 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:88
L:13364 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:283
L:13403 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:284
L:13465 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:285
L:13507 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:286
L:24182 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:513
L:24214 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:515
L:24243 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:516
L:24266 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:517
L:24289 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:518
L:24312 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:519
L:24335 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:520
L:24358 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:521
L:24381 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:522